CLAIMS

We claim

1. A method for uniquely identifying a copy of a motion picture disposed on a media comprising the steps of:

selecting a plurality of motion picture scenes, each of said plurality of motion picture scenes comprising an identifiable portion of said motion picture distinct from every other portion of said motion picture;

defining a plurality of sequences within each of said plurality of motion picture scenes, each said sequence comprising a plurality of frames; and

selectively marking at least one of said plurality of sequences from each scene with a mark to collectively define a uniquely identifiable marking pattern.

2. The method according to claim 1 further comprising the step of selecting said motion picture scenes so that they are separated from each other by a buffer section of said motion picture.

3. The method according to claim 1 wherein said step of selecting said plurality of motion picture scenes further comprises selectively identifying portions of said motion picture that include relatively little motion.

4. The method according to claim 1 wherein said step of selecting said plurality of motion picture scenes further comprises selectively identifying portions of said motion picture that have at least one of lighting and coloration characteristics to enhance the visibility of said mark.

5. The method according to claim 1 wherein said selectively marking step is comprised of marking a plurality of consecutive frames in each said sequence that has been marked.

6. The method according to claim 1 wherein said selectively marking step is further comprised of marking at least one frame within each said sequence that has been marked.

7. The method according to claim 6 wherein said selectively marking step comprises marking three consecutive frames within each said sequence that has been marked.

8. The method according to claim 6 further comprising the step of selecting said at least one marked frame to include a first frame appearing within each sequence that has been marked.

9. The method according to claim 6 wherein said marking step further comprises modifying said media so that said mark is visible when an image associated with said frame is displayed.

10. The method according to claim 9 further comprising the step of forming said mark as a constellation of dots.

11. The method according to claim 10 further comprising the step of assigning a uniquely identifiable constellation of dots to each of a plurality of production locations.

12. The method according to claim 10 further comprising the step of forming each of said dots to have a profile corresponding to a predetermined shape.

13. The method according to claim 9 further comprising the step of selecting a color of said mark to enhance a contrast with an image associated with a frame.

14. The method according to claim 1 further comprising the step of selecting said motion picture to have three of said scenes, each divided into twenty eight of said sequences, and each said sequence containing 12 of said frames.

15. The method according to claim 1 further comprising the step of selecting said media to be film print.

16. The method according to claim 15 wherein said marking step is further comprised of physically forming said mark on at least one frame.

17. The method according to claim 1 further comprising the step of selecting said medium to be a digital storage medium.

18. The method according to claim 17 wherein said marking step is further comprised of modifying a digital data on said digital storage medium.

19. The method according to claim 18 wherein said modifying step is selected to cause said mark to appear within at least one image that is displayed during playback of said motion picture from said digital storage medium.

20. The method according to claim 1 wherein each of said sequences corresponds to a number and said selectively marking step further comprising marking respective ones of said sequences in each of said scenes so that the combination of the numbers of the sequences that are marked correspond to a film print identification number assigned to said copy.

21. The method according to claim 1 further comprising the step of varying said marking pattern for each production copy of said motion picture so that no two copies of said motion picture have the same marking pattern.

22. The method according to claim 1 further comprising the steps of:

selecting a second plurality of motion picture scenes, each of said second plurality of motion picture scenes comprising an identifiable portion of said motion picture distinct from every other portion of said motion picture;

defining a plurality of said sequences within each of said second plurality of motion picture scenes, each said sequence comprising a plurality of said frames; and

selectively marking at least one of said plurality of sequences from each of said second plurality of scenes scene to repeat said uniquely identifiable marking pattern.

23. A security coded motion picture disposed on a media comprising:

a plurality of motion picture scenes, each of said plurality of motion picture scenes comprising an identifiable portion of said motion picture distinct from every other portion of said motion picture;

a plurality of sequences predefined within each of said plurality of motion picture scenes, each said sequence comprising a plurality of frames; and

wherein at least one of said plurality of sequences from each said plurality of motion picture scenes includes a mark, said marked sequences collectively defining a uniquely identifiable marking pattern.

24. The security coded motion picture according to claim 23 wherein each of said motion picture scenes are separated from each other by a buffer section of said motion picture.

25. The security coded motion picture according to claim 23 wherein said plurality of motion picture scenes is comprised of portions of said motion picture that include relatively little motion.

26. The security coded motion picture according to claim 23 wherein said plurality of motion picture scenes have at least one of density, lighting and coloration characteristics selected to enhance the visibility of said mark.

27. The security coded motion picture according to claim 23 wherein each of said sequences that is marked comprises a plurality of consecutive marked frames.

28. The security coded motion picture according to claim 23 wherein each of said sequences that is marked is comprised of at least one marked frame.

29. The security coded motion picture according to claim 23 wherein each of said sequences that is marked is comprised of three consecutive frames that have been marked.

30. The security coded motion picture according to claim 28 wherein said at least one marked frame comprises at least a first frame appearing within said sequence that has been marked.

31. The security coded motion picture according to claim 28 wherein said marked frame comprises said mark superimposed on an image associated with said at least one frame so that said mark is visible when said image is displayed.

32. The security coded motion picture according to claim 31 wherein said mark is a constellation of dots.

33. The security coded motion picture according to claim 32 wherein said constellation of dots is exclusively associated with one of a plurality of production locations.

34. The security coded motion picture according to claim 32 wherein each of said dots to has a profile corresponding to a predetermined shape.

35. The security coded motion picture according to claim 31 wherein a color of said mark contrasts with an image associated with a frame to facilitate subsequent detection.

36. The security coded motion picture according to claim 23 wherein said motion picture contains at least three of said scenes, each divided into at least ten of said sequences, and each said sequence containing at least eight of said frames.

37. The security coded motion picture according to claim 23 wherein said media is a film print.

38. The security coded motion picture according to claim 37 wherein said mark comprises an image disposed on said film print.

39. The security coded motion picture according to claim 23 wherein said medium is a digital storage medium.

40. The security coded motion picture according to claim 39 wherein said digital data on said digital storage medium is modified to produce said marking.

41. The security coded motion picture according to claim 40 wherein said digital data is modified to cause said marking to appear within at least one image that is displayed during playback of said motion picture from said digital storage medium.

42. The security coded motion picture according to claim 23 wherein each of said sequences corresponds to a number and the combination of the numbers of the sequences that are marked correspond to a film print identification number assigned to a particular production copy of said motion picture.

43. The security coded motion picture according to claim 23 wherein said marking pattern for each copy of said motion picture is different for each production copy of said motion picture.

44. The security coded motion picture according to claim 23 further comprising a second plurality of motion picture scenes, each of said second plurality of motion picture scenes comprising an identifiable portion of said motion picture distinct from every other portion of said motion picture;

a plurality of said sequences within each of said second plurality of motion picture scenes, each said sequence comprising a plurality of said frames; and

wherein at least one of said plurality of sequences from each of said second plurality of scenes is marked to repeat said uniquely identifiable marking pattern.

45. An apparatus for uniquely identifying a copy of a motion picture disposed on a media comprising:

means for selecting a plurality of motion picture scenes, each of said plurality of motion picture scenes comprising an identifiable portion of said motion picture distinct from every other portion of said motion picture;

means for defining a plurality of sequences within each of said plurality of motion picture scenes, each said sequence comprising a plurality of frames; and

means for selectively marking at least one of said plurality of sequences from each scene to collectively define a uniquely identifiable marking pattern.

46. An apparatus for uniquely identifying a copy of a motion picture disposed on a media comprising:

means responsive to a user input identifying a plurality of motion picture scenes, for defining a plurality of sequences within each of said plurality of motion picture scenes, each said sequence comprising a plurality of frames; and

means for selectively marking at least one of said plurality of sequences from each scene to collectively define a uniquely identifiable marking pattern; and

wherein each of said plurality of motion picture scenes comprises an identifiable portion of said motion picture distinct from every other portion of said motion picture.

47. The apparatus according to claim 46 wherein said means for selectively marking marks three consecutive frames within each said sequence that has been marked.

48. The apparatus according to claim 46 wherein said means for selectively marking marks at least one frame in each of said sequences that are marked.

49. The apparatus according to claim 48 wherein said at least one frame in each said sequence includes a first frame appearing within each said sequence.

50. The apparatus according to claim 48 wherein said means for selectively marking modifies said media to cause a mark to be associated with each said frame that has been marked so that said mark is visible when said image is displayed.

51. A security coded motion picture comprising:

a motion picture recording comprised of a plurality of frames, each containing at least a portion of an image associated with said motion picture, at least one predetermined frame of said motion picture defining a reference point relative to which a plurality of other frames can be uniquely identified; and

at least one of said frames containing a mark, a position of said at least one marked frame relative to said reference point uniquely identifying a particular production copy of said motion picture.

52. The security coded motion picture according to claim 51 wherein a plurality of said marked frames collectively define a uniquely identifiable marking pattern.

53. The security coded motion picture according to claim 51 wherein each said marked frame is part of a series of consecutively marked frames.

54. The security coded motion picture according to claim 53 wherein there are between two to ten marked frames in each said series.

55. A method for security coding a motion picture comprising:

storing on a media a motion picture recording comprised of a plurality of frames, each containing at least a portion of an image associated with said motion picture; and

selectively marking at least one of said frames having an identifiable position relative to at least one predetermined reference point frame in said motion picture, with a predetermined mark, said position of said at least one marked frame uniquely identifying a particular production copy of said motion picture.

56. The method according to claim 55 further comprising the step of selecting a plurality of said marked frames to collectively define a uniquely identifiable marking pattern for each production copy of a motion picture.

57. The method according to claim 55 further comprising the step of forming each said marked frame as part of a series of consecutively marked frames.

58. The method according to claim 57 further comprising the step of forming from two to ten marked frames in each said series.

59. Apparatus for security coding a motion picture comprising:

means for storing on a media a motion picture recording comprised of a plurality of frames, each containing at least a portion of an image associated with said motion picture; and

means for selectively marking at least one of said frames having an identifiable position relative to at least one predetermined reference point frame in said motion picture, with a predetermined mark, said position of said at least one marked frame uniquely identifying a production copy of said motion picture.